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*"Welcome Shelter Near Trail's End"*

FEDERAL-STATE COOPERATIVE  
SNOW SURVEYS AND IRRIGATION WATER FORECASTS

FOR OREGON

MAY 1, 1947

By

Division of Irrigation, Soil Conservation Service  
United States Department of Agriculture  
and  
Oregon Agricultural Experiment Station

Data included in this report were obtained by the agencies named above in cooperation with the Oregon State Engineer, U. S. Forest Service, National Park Service and other Federal, State and local organizations.

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Report Prepared

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May 1, 1947

REVISED WATER SUPPLY OUTLOOK

Oregon's 1947 water supply prospects have changed little since April 1 when 72 percent of all irrigated lands had in sight "good" to "fair" water supplies. These are lands chiefly served from reservoirs. Most lands depending upon unregulated streamflow will have "deficient" to "fair" water supplies.

State-wide precipitation during April was 85 percent of normal, with greater than normal amounts received in the Columbia River and Blue Mountain areas, and deficiencies elsewhere reaching as low as 56 percent of normal in Southern Oregon and 64 percent in the South-central area.

Mountain snow cover at high elevations began to release water for stream flow in the latter part of March and early April. Snow melting at high elevations usually does not begin until late April or early May. Early snow melt is an advantage for reservoir supplies but a distinct disadvantage for water users dependent upon unregulated streamflow.

Revised forecasts indicate that streamflow in the Umatilla-Walla Walla area and in the Grande Ronde River will be about 5 percent greater than forecast on April 1, while streamflow generally in Southern Oregon will be about 5 percent less. The general water supply picture is relatively unchanged from that reported on April 1. Revised forecasts are listed on page 2, and the reader is referred to the April 1 report for data on other Oregon streams.

Total water stored in all important Oregon reservoirs is 10 percent less than at this date last year, 2 percent less than in 1945, 1 percent more than in 1944, and 6 percent less than the 10-year average.

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REVISED STREAMFLOW FORECASTS, May 1, 1947

The following revised runoff forecasts are based on mountain snow cover and on the assumption that precipitation and temperature during the remaining runoff season will be approximately normal. Appreciable deviations from normal of temperature and/or precipitation, especially during May or June, will correspondingly modify these forecasts.

BASIN AND STREAM	Apr.-Sept., inc. Streamflow in Thous. A.F.				
	Forecast	Measured Runoff		10-yr. avg.	
	1947	1946	1945	1944	1936-45
<u>NORTHCENTRAL OREGON</u>					
White R. below Tygh Valley	70.0	181.0	119.3	87.6	129.9
<u>UMATILLA-WALLA WALLA</u>					
McKay Creek above McKay Reservoir	18.0	a	34.5	26.3	26.5
Umatilla River near Gibbon	64.0	103.5	94.2	63.6	77.7
Umatilla River at Pendleton	105.0	193.7	188.7	122.7	152.4
Walla Walla R., So.Fk. nr. Milton	56.0	a	69.8	55.8	62.8
<u>NORTHEASTERN OREGON</u>					
Wallowa R., E.Fk. plus Power Plant	11.0	13.3	10.9	8.5	10.1
Hurricane Creek near Joseph	42.0	a	41.8	32.6	39.4
Lostine River near Lostine	113.0	a	125.6	89.8	110.2
Grande Ronde River nr. LaGrande	130.0	a	168.4	93.3	155.0
<u>EASTERN OREGON</u>					
Strawberry Creek nr. Prairie City	5.5	9.9	8.0	5.1	7.5
Malheur R., Mid.Fk. near Drewsey	29.0	a	80.4	27.2	73.2
Malheur R., No.Fk., at Beulah	25.0	a	53.6	29.9	56.9
<u>CENTRAL OREGON</u>					
Crescent Lake Net Inflow	11.0	a	11.1	9.2	12.7
Odell Creek near Crescent	22.0	32.6	24.1	20.1	24.4
<u>KLAMATH BASIN</u>					
Williamson R. below Sprague R.	235.0	415.4	332.5	263.2	375.0
Upper Klamath Lake Net Inflow	330.0	557.0	409.9	395.9	481.7
<u>SOUTHERN OREGON</u>					
Fourmile Lake Net Inflow	4.7	8.7	7.3	5.9	6.9
Rogue R., So.Fk. above Imnaha Creek	28.0	a	54.4	40.1	52.1
Rogue R., Mid.Fk. plus Power Canal	48.0	a	74.5	61.4	69.9
Rogue River N.Fk. above Prospect	200.0	370.4	295.4	237.3	286.6
Rogue River below So. Fk.	435.0	a	656.4	533.4	629.4
<u>WILLAMETTE VALLEY</u>					
Willamette R., Mid.Fk. at Eula	580.0	a	889.2	555.6	749.4

NOTE: Refer to Snow Survey and Irrigation Water Supply Forecasts, dated April 1, 1947, for streams not listed above.

a. 1946 Discharge record not available.



STATUS OF RESERVOIR STORAGE, MAY 1, 1947

BASIN AND STREAM	RESERVOIR	USABLE CAPACITY (Thous.A.F.)	THOUS. A.F. IN STORAGE ABOUT MAY 1.				
			1947	1946	1945	1944	10-yr.avg. 1936-45
UPPER COLUMBIA DRAINAGE							
LOWER SNAKE IN OREGON							
Owyhee	Owyhee	715.0	626.9	711.4	715.0	603.7	698.0
Malheur	Warm Springs	191.0	144.8	193.3	120.3	150.2	151.7
	Agency Valley	60.0	58.7	55.9	60.2	53.0	54.9
Burnt	Unity	25.2	24.6	22.5	19.8	18.3	22.1
Powder	Thief Valley	17.4	17.6	17.4	17.4	17.6	17.4
Grande Ronde	Wallowa Lake	40.9	25.9	17.9	13.7	33.8	25.0
LOWER COLUMBIA DRAINAGE							
Umatilla	McKay	74.0	N.R.	71.3	71.3	71.3	62.6
	Cold Springs	50.0	50.0	48.3	47.0	49.8	46.4
Deschutes	Ochoco	46.0	35.3	46.8	21.5	26.2	28.8
	Crescent Lake	80.0	53.5	34.8	36.0	53.5	36.8
	Crane Prairie	50.0	43.0	41.7	35.1	49.8	38.9
	Wickiup	180.0	96.2	85.2	64.2	17.4	33.4 <sup>d</sup>
Willamette	Cottage Grove	33.1 <sup>b</sup>	32.5	27.5	28.3	31.6	30.9 <sup>d</sup>
	Fern Ridge	101.2 <sup>b</sup>	94.8	81.7	89.6	43.1	72.8 <sup>f</sup>
WEST COAST DRAINAGE							
Rogue	Fish Lake	7.7	5.0	4.9	4.6	7.1	5.6
	Fourmile Lake <sup>a</sup>	16.0	6.6	9.0	9.3	12.1	10.2 <sup>e</sup>
	Emigrant Gap	8.2	8.1	8.2	8.2	8.3	8.2
	Hyatt Prairie <sup>a</sup>	16.0	4.8	7.7	6.3	9.6	9.9
Klamath	Upper Klamath	584.0 <sup>c</sup>	431.7	445.4	381.8	444.6	507.5
	Gerber	94.0	42.6	66.8	70.3	57.2	68.6
	Clear Lake	440.2	220.5	297.7	293.3	302.9	259.9
Goose Lake	Cottonwood	4.1	2.9	4.0	3.7	N.R.	3.1 <sup>g</sup>
	Drew	62.5	37.8	57.5	60.0	49.6	59.1 <sup>h</sup>

N.R.= No report

a = By ditch to Rogue River side  
from Klamath drainage

b = Storage space reserved for flood control

c = Based on gage zero elevation of 4135.0

d = 1943-45

e = Excl. '37

f = 1942-45

g = Excl. '42, '43, '44

h = Excl. '42



VALLEY PRECIPITATION<sup>a</sup>

DIVISION	CURRENT YEAR		LAST YEAR	
	Oct. 1, 1946--May 1, 1947		Oct. 1, 1946--May 1, 1947	
	P	D	P	D
Southeastern	6.1	-0.8	6.79	-0.15
Southcentral	9.6	-2.3	11.38	+0.80
Northcentral	7.8	-1.3	11.80	+2.39
Columbia River	7.9	-1.7	9.71	+0.13
Wallowa Mountains	9.3	-1.3	10.19	-1.24
Blue Mountains	13.2	+0.2	13.56	+0.22
Southern	16.6	-3.2	22.90	+3.36
Willamette Valley	44.6	+0.3	50.75	+6.82

P = Inches Precipitation

D = Inches Departure from Normal

<u>Southeastern:</u>	Southeastern Oregon range lands, Harney and Malheur Counties.
<u>Southcentral:</u>	Southcentral Oregon range lands, Lake County and Klamath County, except the Cascade Mountains.
<u>Northcentral:</u>	Northcentral Oregon wheat and range lands, Crook, Deschutes, Jefferson, Wheeler, and part of Grant Counties.
<u>Columbia River:</u>	Columbia River area, wheat and range lands, Gilliam, Morrow, Sherman, Wasco, and part of Umatilla Counties.
<u>Wallowa Mountains:</u>	Wallowa Mountain area, forest and range lands, Wallowa and part of Baker County.
<u>Blue Mountains:</u>	Blue Mountain forest and range lands, Union, and parts of Baker, Grant, and Umatilla Counties.
<u>Southern:</u>	Southern Oregon irrigated section, Jackson and Josephine Counties.
<u>Willamette Valley:</u>	Parts of Polk, Benton, Yamhill, Washington, and Lane; all of Linn, Marion, Clackamas, and Multnomah Counties.

a - Data furnished by U. S. Weather Bureau.



OREGON SNOW SURVEYS, MAY, 1947

DRAINAGE BASIN and SNOW COURSE	LOCATION		SNOW COVER MEASUREMENTS						
	Number or State	Sec. Twp. Range	Elev.	Date of Survey	Snow Depth (In.)	Water Content (In.)		Past Record Years of Record (In.)	
						Same Approx. Date	1945		
						1947	1946	1945	



The following organizations cooperate in the Oregon snow survey work:

STATE

Idaho Cooperative Snow Surveys  
Nevada Cooperative Snow Surveys  
Oregon Agricultural Experiment Station  
Oregon State Engineer and Corps of State Watermasters  
Oregon State Highway Engineers

FEDERAL

Department of Agriculture  
Forest Service  
Soil Conservation Service  
Department of Commerce  
Weather Bureau  
Department of the Interior  
Bonneville Power Administration  
Bureau of Reclamation  
Fish and Wildlife Service  
Geological Survey  
Indian Service  
National Park Service  
War Department  
Army Engineer Corps

PUBLIC UTILITIES

California-Pacific Utilities Company  
Portland General Electric Company  
The California Oregon Power Company

MUNICIPALITIES

City of Corvallis  
City of LaGrande  
City of The Dalles  
City of Baker

IRRIGATION DISTRICTS

Associated Ditch Companies  
Central Oregon Irrigation District  
Deschutes County Municipal Improvement District  
Grants Pass Irrigation District  
Jordan Valley Irrigation District  
Lakeview Water Users Incorporated  
Medford Irrigation District  
Ochoco Irrigation District  
Rogue River Irrigation District  
Talent Irrigation District  
Vale-Oregon Irrigation District  
Warm Springs Irrigation District

PRIVATE CORPORATIONS

Amalgamated Sugar Company

